

CLAIMS

We claim the following:

- 1 1. An apparatus, comprising:
2 a loading bed moveable between a loading position and a second
3 position;
4 a plate-like member moveable with respect to the loading bed
5 between a loading position and a second position, the plate-like member
6 having a hinged portion; and
7 a sealing member positioned at an end of the hinged portion, the
8 sealing member sealing a wrap about a sequenced group of product to
9 form a package when the plate-like member is positioned over the loading
10 bed.
- 1 2. The apparatus of claim 1, wherein the loading position of the loading
2 bed is a raised position descending to a lowered position as the product is
3 placed on the loading bed.
- 1 3. The apparatus of claim 2, wherein the lowered position of the loading
2 bed is a height which allows the plate-like member to laterally move over
3 the product when the product is placed on the loading bed.
- 1 4. The apparatus of claim 1, wherein the loading position of the loading
2 bed is a position aligned with a drop-off point of the product and the
3 second position of the loading bed is a remote position for dropping the
4 package therefrom.

- 1 5. The apparatus of claim 1, further comprising:
2 a clamping mechanism which hold a portion of the wrap during
3 movement of the plate-like structure towards the loading bed;
4 a serrate mechanism to serrate the wrap when the sealing member
5 seals the wrap to form the package; and
6 a cutting mechanism to cut the wrap when the package drops from
7 the loading bed.
- 1 6. The apparatus of claim 1, wherein the hinged portion is moveable
2 between a first position and a second position, in the second position, the
3 hinged portion rests on an upper surface of the loading bed when the plate-
4 like member is positioned over the loading bed.
- 1 7. The apparatus of claim 1, wherein the plate-like member moves the
2 wrap over the product when the plate-like member moves to the second
3 position.
- 1 8. The apparatus of claim 7, wherein the second position of the plate-like
2 member is a raised position over the product stacked on the loading bed.
- 1 9. The apparatus of claim 1, further comprising a clamping and serrate
2 mechanism which clamps a portion of the wrap while the plate-like
3 member moves other portions of the wrap over the product when moving
4 toward the second position, the clamping and serrate mechanism further
5 serrates the wrap after the sealing member seals the wrap about the
6 product.
- 1 10. The apparatus of claim 1, further comprising a wrap supply which

2 supplies wrap when the plate-like member moves to the second position.

1 11. The apparatus of claim 1, wherein the sequenced product is types of
2 mail objects.

1 12. An apparatus for packaging product, comprising:

2 a loading bed moveable between a first position and a second
3 position;

4 a bag former mechanism moveable with respect to the loading bed
5 between a first position and a second position;

6 a hinged portion positioned at an end of the bag former
7 mechanism;

8 a sealing member positioned at an end of the hinged portion, the
9 sealing member sealing a wrap about product to form a package when the
10 bag former mechanism is positioned over the loading bed; and

11 a clamping and serrate mechanism positioned proximate to the
12 wrap, wherein

13 the clamping and serrate mechanism clamps the wrap
14 during the movement of the bag former mechanism toward the second
15 position,

16 the clamping and serrate mechanism serrates the wrap after
17 the sealing member seals the wrap to form the package.

1 13. The apparatus of claim 12, wherein the first position of the loading
2 bed is a raised loading position descending to a lowered position during
3 placement of the product on the loading bed, the lowered position being at
4 a position which allows the bag former mechanism to move laterally into
5 the second position over the product and the loading bed.

- 1 14. The apparatus of claim 12, wherein the hinged portion is moveable
2 between a first position and a second position, in the second position, the
3 hinged portion rests on an upper surface of the loading bed when the bag
4 former mechanism is positioned over the loading bed and the product.
- 1 15. The apparatus of claim 14, wherein the sealing member seals portions
2 of the wrap when the hinged portion is in the second position.
- 1 16. The apparatus of claim 12, wherein the bag former mechanism moves
2 the wrap over the product on the loading bed when the bag former
3 mechanism moves to the second position.
- 1 17. The apparatus of claim 12, wherein the bag former mechanism is
2 moveable between a raised position and a lowered position, in the raised
3 position, the bag former mechanism is movable over the product stacked
4 on the loading bed.
- 1 18. A method of packaging a sequenced group of product for a delivery
2 point, comprising the steps of:
3 stacking product on a first platform in a sequenced arrangement;
4 moving wrap over the stacked product by use of a plate-like
5 structure;
6 holding a portion of the wrap during the moving stage;
7 lowering a hinged portion to rest on portions of the wrap
8 positioned proximate to an upper surface of the first platform; and
9 sealing portions of the wrap about portions of the stacked product.
- 1 19. The method of claim 18, further comprising the step of lowering the

2 first platform during or after the stacking step.

1 20. The method of claim 18, comprising the step of serrating the wrap
2 after the sealing of the wrap.

1 21. The method of claim 18, further comprising the steps of:
2 moving the first platform to a remote position and dropping the
3 packaged product;
4 raising the first platform;
5 moving the first platform to a loading position different from the
6 remote position;
7 moving the plate-like structure to an original position; and
8 raising the hinged portion.

1 22. An apparatus, comprising:
2 a sequencing device sequencing mail objects, the sequencing
3 device including an input and an output;
4 a packaging mechanism positioned proximate to the output of the
5 sequencing device, the packaging mechanism packaging sequenced mail
6 objects for delivery routes provided by the sequencing device, the
7 packaging mechanism including:
8 a loading bed moveable between two positions;
9 a bag former mechanism moveable with respect to the
10 loading bed between two positions;
11 a hinged portion positioned at an end of the bag former
12 mechanism; and
13 a member positioned proximate to the hinged portion, the
14 member sealing a wrap about a group of sequenced mail objects to form a

15 package.

1 23. The apparatus of claim 22, further including a clamping and serrate
2 mechanism, the clamping and serrate mechanism clamps the wrap during
3 the movement of the bag former mechanism toward a loading position of
4 the two positions and serrates the wrap after the sealing member seals the
5 wrap to form the package.

1 24. The apparatus of claim 22, wherein the two positions of the loading
2 bed and the bag former mechanism is a retractable position and a loading
3 position moveable between a first position and a second position.

1 25. The apparatus of claim 22, wherein the hinged portion is moveable
2 between a first position and a second position, in the second position, the
3 hinged portion rests on an upper surface of the loading bed when the bag
4 former mechanism is positioned over the loading bed.